Clinical and other Notes

cascara; the bowels act easily without pain. Since the operation he has put on a considerable amount of flesh. He was discharged from hospital on September 16th, 1908.

FRACTURES OF THE METACARPAL BONES AS THE RESULT OF "BOXING OR FIGHTING."

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With an Introductory Note by MAJOR F. E. GUNTER.
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INTRODUCTORY NOTE.

In an interesting article on "Punch Fractures" in the British Medical Journal of March 28th, 1908, Mr. Harold Burrows calls attention to the frequency with which a metacarpal bone is fractured when a resisting object is struck with the closed fist.

Fracture of the metacarpal bones is extremely common. In our experience at the Military Hospital, Curragh, it is the commonest of all fractures. Of 100 consecutive fractures of the extremities treated here, eighteen were fractures of one or other of the metacarpal bones; of this number twelve were caused by boxing or fighting. Of these twelve, four were of the first metacarpal (in every case of the base), five were of the second (all but one transverse of the shaft), three of the fourth. There were no fractures of the third or of the fifth metacarpals. The commonest cause of these fractures, as Lieutenant Leahy points out, is a blow on the point of the opponent's elbow.

The reason why the base of the first metacarpal is so frequently broken is probably that it is driven forcibly against the base of the second metacarpal, which is well protected by its bony relations and is more or less fixed.

The following skiagrams illustrating the different forms of fracture, and the photographs, are by Private J. S. Thorburn, R.A.M.C., skiagraphist.

ARTICLE BY LIEUTENANT M. P. LEAHY.

Fractures of the first and second metacarpal bones, when caused by boxing, are due to direct violence in the vast majority of cases. They are most commonly produced by either swinging or hooked blows. Blows landing on the point of the elbow or the poll—that is the top and back part of the head—are the most frequent cause of these injuries.

Before going further it may be well to define what is meant by "hooked blows" and "swings." A hook is a blow delivered with a bent and rigid arm. The force is derived from a quick, short twist of the body, the arm being kept bent throughout. The idea is to plant all four knuckles simultaneously on some part of the opponent's anatomy. Hooks
are largely used by first-class professionals. A swing, on the other hand, is delivered with a straight arm, and the force is derived from a swing of the body and a flail-like motion of the arm. In delivering a swing, one is never quite sure what part of the fist will come in contact with the enemy, but it most commonly happens that the back of the hand is the part that lands. Hence one sees how easily fracture can be produced. For this reason, and also because swings are a slow method of attack, they are rarely used by first-class pugilists.

The following examples are intended to show how these fractures may be produced: Take two opponents, "A" and "B." "A" endeavours to land a swinging blow with his right fist on "B's" ribs; to get the greatest force, he starts holding his fist low down and swings it upwards. To guard this "B" presents his left elbow, flexing the forearm rigidly on the arm, and leaning down towards the same (left) side. If "B" is quick
enough with this guard, "A’s" blow will then land either on "B’s" upper arm or the point of "B’s" elbow. In the latter case the first or second metacarpals will most probably come in contact with "B's" elbow, and fracture is very likely to result. In a similar manner, the same injury may be caused if "A" tries a hook for the ribs. The accompanying photograph (No. 1) illustrates this accident resulting from a hook blow. Take another case. "A" tries a swinging blow with his right hand for "B’s" jaw; to guard this, "B" presents his elbow, holding his arm with the forearm flexed rigidly on the upper arm (this guard is considered a foul in boxing competitions, as serious injuries to the hand and wrist are often produced). If "A’s" fist crashes on to the point of "B’s" elbow, a fracture can very easily be produced, as the whole force of "A's" blow is travelling along the same line as "B’s" arm, which is fixed; therefore, if the blow lands on the point of "B’s" elbow, "A’s" fist meets with the greatest possible resistance. (See photograph No. 2.)

Again, a swinging blow aimed for the jaw, but landing on the back of the opponent’s head, may cause fracture. In this case the back of the hand comes in contact with the head, and fracture has occurred even
when wearing an 8-ounce glove. Quite recently I have seen two such cases.

A word about straight punches in this connection. A straight punch cannot cause a fracture of the first metacarpal bone, as, from the manner in which a straight punch is delivered, the first metacarpal cannot come in contact with any fixed bony point. As regards the second metacarpal, I have known one case in which apparently a straight punch on the jaw caused fracture. This was probably due to a bad delivery of the blow, by which I mean that instead of getting all four knuckles planted at the same time on the jaw, the second metacarpal was the only one to come in contact, and had to stand the full force of the blow. A straight punch aimed for the ribs, but landing on the crest of the ilium, might also cause this fracture.

In the early days of the prize ring, when men fought with bare knuckles, fractures of all the metacarpals were much more common. The old fighters had a very different style from that in vogue to-day.
stood square to their opponents, chest, head, and shoulders pointing straight to the front, both arms flexed, fists held on a level with the eyes, knuckles and back of hands pointing chiefly to the front. Their attack consisted largely of "chopping" blows—that is, blows delivered from above downwards—and when these blows landed on the top and back of the opponent's head, severe injuries, including fracture, were frequently the result.

In conclusion, I would say fractures rarely occur in scientific boxing. When they do occur they are the result of foul guards, such as the elbow guard described, or a faulty method of hitting, such as hitting with the back of the hand instead of the knuckles. In bare knuckle fighting, swinging and chopping blows are the most likely cause of the fracture. To avoid injuries, hit straight and aim for the opponent's body.

A FURTHER REPORT ON TWENTY-EIGHT CASES OF PARTIAL REMOVAL OF INTERNAL SEMILUNAR CARTILAGE FOR RECURRENT DISLOCATION.

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I CONTRIBUTED to the Journal for December, 1906, a paper on twelve operations for the above-mentioned disabling condition, since when I have had twenty-eight cases. All were operated on under eucaine and adrenalin (Barker's formula), and the analgesia was perfectly satisfactory in every case. Considering how extremely sensitive the structures around and inside the knee-joint are, it is really surprising how uniformly successful this form of analgesia is. The incision through which the cartilage was removed was that advocated in my previous paper. It is quite large enough to afford adequate exposure, and to remove the required section of the cartilage with a minimum disturbance of parts. I do not think the long vertical incision, which is practised by some surgeons, is at all necessary, and I believe that in the case of cavalry soldiers it may prove a subsequent source of trouble when riding. I have seen this result in one case. In only one case was it found necessary to remove the whole of the cartilage, the anterior segment being usually quite sufficient. No drainage was used in the last thirty-five cases. A variable amount of effusion occurs in every case and need cause no alarm. It is absorbed under seven days.

I have found the best way to remove the cartilage is to make a transverse incision through the thickened synovial membrane (which is practically always in this condition) about \( \frac{1}{4} \) of an inch above the articular surface of the tibia. Then seize in a pair of forceps the portion of membrane which is to be removed, and cut vertically through it on to the head of the tibia as far as possible towards the middle line.